1. A conjugate comprising a polymer to which is operably bound no less than two molecules of synthetic peptides, wherein each molecule of synthetic peptide is operably bound to the polymer via a reactive functionality, wherein each synthetic peptide comprises an amino acid sequence derived from a heptad repeat region of Human Immunodeficiency Virus (HIV) gp41, wherein synthetic peptide comprises an amino acid sequence of no less than about 16 amino acids and no more than about 60 amino acids, and wherein the conjugate has durability comprising antiviral activity against HIV strains resistant to synthetic peptide alone.

2. The conjugate according to claim 1, wherein the polymer comprises a molecular weight in a range of molecular weights of from about 200 daltons to about 20,000 daltons.

3. The conjugate according to claim 2, wherein the polymer comprises polyethylene glycol comprising a specific number of ethylene units.

4. The conjugate according to claim 1, wherein each synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41.

5. The conjugate according to claim 4, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

6. The conjugate according to claim 1, wherein each synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

7. The conjugate according to claim 6, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

8. The conjugate according to claim 1, wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41, and wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

9. The conjugate according to claim 1, wherein the molecules of synthetic peptide

I. CONJ. (1-9) 424/196.11, 208.1

II. METH MAK CONJ (10-18) 530/324-326

III. METH USING CONJ (19-30) 435/5

are operably bound to the polymer via a portion of each synthetic peptide selected from the group consisting of an N-terminus, a C-terminus, and an internal lysine.

10. A method of making a conjugate, the method comprising the steps of:

(a) reacting a first molecule of synthetic peptide with a polymer in forming an intermediate comprising a first intermediate, wherein the first molecule of synthetic peptide operably binds to a first reactive functionality of the polymer; and

(b) reacting the intermediate comprising the first intermediate with a second molecule of synthetic peptide, wherein the second molecule of synthetic peptide operably binds to the intermediate comprising the first intermediate via a second reactive functionality of the polymer, in forming a conjugate comprised of a polymer to which is operably bound no less than two molecules of synthetic peptides; and

wherein each molecule of synthetic peptide is operably bound to the polymer via a reactive functionality, wherein each synthetic peptide comprises an amino acid sequence derived from a heptad repeat region of Human Immunodeficiency Virus (HIV) gp41, wherein synthetic peptide comprises an amino acid sequence of no less than about 16 amino acids and no more than about 60 amino acids, and wherein the conjugate has durability comprising antiviral activity against HIV strains resistant to synthetic peptide alone.

11. The method according to claim 10, wherein the polymer comprises a molecular weight in a range of molecular weights of from about 200 daltons to about 20,000 daltons.

12. The method according to claim 11, wherein the polymer comprises polyethylene glycol comprising a specific number of ethylene units.

13. The method according to claim 10, wherein each synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41.

14. The method according to claim 13, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

15. The method according to claim 10, wherein each synthetic peptide of the

conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

16. The method according to claim 15, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

17. The method according to claim 10, wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41, and wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

18. The method according to claim 10, wherein the molecules of synthetic peptide are operably bound to the polymer via a portion of each synthetic peptide selected from the group consisting of an N-terminus, a C-terminus, and an internal lysine.

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19. A method of inhibiting transmission of HIV to a target cell, the method comprising adding to the virus and the cell an amount of conjugate effective to inhibit infection of the cell by the virus; wherein the conjugate comprises a polymer to which is operably bound no less than two molecules of synthetic peptides, wherein each molecule of synthetic peptide is operably bound to the polymer via a reactive functionality, wherein each synthetic peptide comprises an amino acid sequence derived from a heptad repeat region of Human Immunodeficiency Virus (HIV) gp41, wherein synthetic peptide comprises an amino acid sequence of no less than about 16 amino acids and no more than about 60 amino acids, and wherein the conjugate has durability comprising antiviral activity against HIV strains resistant to synthetic peptide alone.

20 The method according to claim 19, wherein the polymer comprises a molecular weight in a range of molecular weights of from about 200 daltons to about 20,000 daltons.

21. The method according to claim 20, wherein the polymer comprises polyethylene glycol comprising a specific number of ethylene units.

22. The method according to claim 19, wherein each synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41.

23. The method according to claim 22, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

24. The method according to claim 19, wherein each synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

25. The method according to claim 24, wherein each synthetic peptide of the conjugate comprises an identical amino acid sequence.

26. The method according to claim 19, wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR1 region of HIV gp41, and wherein at least one molecule of synthetic peptide of the conjugate comprises an amino acid sequence derived from the HR2 region of HIV gp41.

27. The method according to claim 19, wherein the molecules of synthetic peptide are operably bound to the polymer via a portion of each synthetic peptide selected from the group consisting of an N-terminus, a C-terminus, and an internal lysine.

28. The method according to claim 19, wherein the conjugate inhibits fusion between the virus and the target cell in inhibiting infection of the cell by the virus.

29. The method according to claim 19, wherein the conjugate further comprises a pharmaceutically acceptable carrier.

30. The method according to claim 29, wherein the conjugate is administered to an HIV- infected individual.